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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,851	11/04/2003	Andrew C.P. Liu	TS01-1542	5803
42717	7590	05/03/2006	EXAMINER	
HAYNES AND BOONE, LLP 901 MAIN STREET, SUITE 3100 DALLAS, TX 75202			RADTKE, MARK A	
			ART UNIT	PAPER NUMBER
			2165	

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/700,851	<b>Applicant(s)</b> LIU, ANDREW C.P.	
	<b>Examiner</b> Mark A. Radtke	<b>Art Unit</b> 2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>29 January 2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 4, 6, 12-13, 17 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 4, 6, 17 and 19, the phrase "looked at" is indefinite and idiomatic. Computers have no eyes, therefore they cannot "look at" things. Applicant recited no limitation wherein the computer was connected to a camera.

As to claim 12, it is unclear how a program can "provide computing power". "Computing power" is an indefinite term, but based on its colloquial usage, Examiner assumes that Applicant wishes to claim wherein processing is performed on the "loader

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program". However, "computing power" must be provided for by hardware, such as the server.

4. Claim 13 recites the limitation "the manufacturing equipment environment and lot status" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

5. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 8-12, 14, 21-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Jeyaraman (U.S. Patent 6,311,187).

As to claim 1, Jeyaraman teaches a method of improving the performance of a relational database data reduction from a source database to target database (See Abstract), comprising of:

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- a. eliminating the need for said target database to be involved in calculating new target data (see column 2, lines 8-9, "independently of the client");
- b. analyzing time and date stamp to determine if record in said source database has been changed (see figure 3, step 308 and column 5, lines 43-47);
- c. deleting changed records from the target data to perform said data reduction (see column 5, lines 56-60), and
- d. inserting updates of said changed records into said target data (see figure 3, step 316 and column 6, lines 16-18).

As to claims 8 and 21, Jeyaraman teaches wherein replicated data can be exported to another database or software system (see Abstract).

As to claim 9, Jeyaraman teaches a method for refining data replication between a source database and a target database (see Abstract), comprising of:

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.

As to claims 10 and 23, Jeyaraman teaches wherein execution performance is independent of the volume of source data (See figure 3. Jeyaraman's performance is independent of the volume of source data for the same reasons as Applicant's claimed invention; only changed records are communicated).

As to claims 11 and 24, Jeyaraman teaches wherein said changed records are determined from analysis of time and date stamps in said source database (see figure 3, step 308 and column 5, lines 43-47).

As to claims 12 and 25, Jeyaraman teaches wherein a loader program provides the computing power for the replication (see Abstract, "independently of events on the client").

As to claim 14, Jeyaraman teaches a system for improving the performance of a relational database data reduction from a source database to target database (see Abstract), comprising of:

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.

As to claim 22, Jeyaraman teaches a system for refining data replication between a source database and a target database (see Abstract), comprising of:

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2-7, 13, 15-20 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeyaraman.

As to claims 2 and 15, Jeyaraman does not expressly teach wherein an equipment work in process list where many lots can be associated with one piece of equipment is replicated between said source database and target database.

However, these differences are only found in the nonfunctional descriptive material and are not functionally involved in the steps recited. The determination of data to be sent in a database update would be performed the same regardless of the logical representation of the data. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability, (see *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994)).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art at the time the invention was made to replicate a database based on any type of

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data, because such data does not functionally relate to the steps in the method claimed and because the subjective interpretation of data does not patentably distinguish the claimed invention.

As to claims 3 and 16, Jeyaraman, as modified, does not expressly teach wherein said changed records result from a changing of a lot position from one piece of said equipment to another.

However, these differences are only found in the nonfunctional descriptive material and are not functionally involved in the steps recited. The determination of data to be sent in a database update would be performed the same regardless of the logical representation of the data. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability, (see *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994)).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art at the time the invention was made to replicate a database based on any type of data, because such data does not functionally relate to the steps in the method claimed and because the subjective interpretation of data does not patentably distinguish the claimed invention.



As to claims 4 and 17, Jeyaraman, as modified, teaches wherein only said changed records are looked at in said source database (see figure 3, steps 310 and 312).

As to claims 5 and 18, Jeyaraman, as modified, teaches wherein said changed records are records that are no longer valid and their updates (See Examiner's response to claim 1. "Changed" records are records whose contents have been deleted or have changed since the last update. See also column 5, lines 56-60. All types of record changes are supported by the invention of Jeyaraman).

As to claims 6 and 19, Jeyaraman, as modified, teaches wherein only looking at said changed records conserves computer resources by being source data volume independent and eliminating need to compare tables (See figure 3. Jeyaraman's performance is independent of the volume of source data for the same reasons as Applicant's claimed invention; only changed records are communicated).

As to claims 7 and 20, Jeyaraman, as modified, teaches wherein the conservation of computer resources allows for real-time synchronization between source said equipment work in process list and target said equipment work in process list (see column 7, lines 22-23).

As to claims 13 and 26, Jeyaraman, as modified, teaches wherein said loader program is capable of displaying on a central monitor the data (see column 6, lines 23-25).

Jeyaraman, as modified, still does not explicitly teach wherein the program displays the manufacturing equipment environment and lot status.

However, these differences are only found in the nonfunctional descriptive material and are not functionally involved in the steps recited. The display of update data would be performed the same regardless of the meaning of the data. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability, (see *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994)).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art at the time the invention was made to display an update based on any type of data, because such data does not functionally relate to the steps in the method claimed and because the subjective interpretation of data does not patentably distinguish the claimed invention.

### ***Additional References***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of art with respect to database replication in general:

Patent No.	Inventor	Cited for teaching
US 5581749 A	Hossain; K. Omar et al.	Database synchronization by timestamp for control systems
US 5826265 A	Van Huben; Gary Alan et al.	Database synchronization by timestamp for control systems
US 5280612 A	Lorie; Raymond A. et al.	Database synchronization by timestamp for control systems
US 6349310 B1	Klein; Johannes et al.	Distributed database updates using deltas

Examiner also cites "Synchronizable Databases for the Web" by Khrabrov et al., published 5 January 2000, which also teaches distributed database updating based on timestamp information.

### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications should be directed to the examiner, Mark A. Radtke. The examiner's telephone number is (571) 272-7163, and the examiner can normally be reached between 9 AM and 5 PM, Monday through Friday.

If attempts to contact the examiner are unsuccessful, the examiner's supervisor, Jeffrey Gaffin, can be reached at (571) 272-4146.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Customer Service at (800) 786-9199.


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1 May 2006

  
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